

ABSTRACT OF THE DISCLOSURE

Disclosed is a method for increasing a data transfer rate without an increase in the whole bandwidth using intrinsic spreading codes and orthogonal codes. The method uses interleaving, OFDM modulation/demodulation, and maximum likelihood detection (MLD) to overcome the effects of multipath fading or signal interference, determines grouped optimal values by a grouping method of dividing the intrinsic spreading codes in series, and calculates an integrated optimal value for all the intrinsic spreading codes using the grouped optimal values, thereby reducing the complexity of MLD according to the length of the intrinsic spreading code and acquiring an improved performance.